

(FILE 'HOME' ENTERED AT 11:35:12 ON 09 FEB 2003)

FILE 'BIOSIS, MEDLINE, INPADOC, CAPLUS' ENTERED AT 11:35:29 ON 09 FEB 2003

L1 6 (COLLAGEN II) AND (D4 PERIOD)

L2 2 DUPLICATE REMOVE L1 (4 DUPLICATES REMOVED)

FILE 'STNGUIDE' ENTERED AT 11:36:30 ON 09 FEB 2003

FILE 'BIOSIS, MEDLINE, INPADOC, CAPLUS' ENTERED AT 11:37:23 ON 09 FEB 2003

L3 0 (COLLAGE II) AND (ACTIVE SITE)

L4 0 (COLLAGEN II) AND (ACTIVE SITE)

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L2 ANSWER 2 OF 2 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 2  
AN 2001:402997 BIOSIS  
DN PREV200100402997  
TI Mapping critical sites in **collagen II** for rational  
design of gene-engineered proteins for cell-supporting materials.  
AU Fertala, Andrzej (1); Han, Wendy B.; Ko, Frank K.  
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SO Journal of Biomedical Materials Research, (October, 2001) Vol. 57, No. 1,  
pp. 48-58. print.  
ISSN: 0021-9304.  
DT Article  
LA English  
SL English  
AB **Collagen II** is the most abundant protein of cartilage  
and forms a network of fibrils extended by proteoglycans that enables  
cartilage to resist pressure. The surface of the collagen fibril serves as  
a platform for the attachment of collagen IX, growth factors, and cells.  
In this study we examined the mechanism of the interaction of chondrocytes  
with recombinant versions of procollagen II, in which one of the four  
blocks of 234 amino acids that define repeating D periods of the collagen  
triple helix has been deleted. Analysis of the attachment of chondrocytes  
to **collagen II** variants with deleted D periods  
indicated that the **collagen II** monomer contains  
randomly distributed sites critical for cell binding. However, as was  
shown by spreading and migration assays, the **D4 period**  
, which is between residues 703 to 936, contains amino acids critical for  
cell motility. We also showed that binding, spreading, and migration of  
chondrocytes through three-dimensional nanofibrillar collagenous matrices  
are controlled by an interaction of the collagen triple helix with beta1  
integrins. The results of this study provide a basis for the rational  
design of a scaffold containing genetically engineered collagen with a  
high density of specific sites of interaction.

(FILE 'HOME' ENTERED AT 15:31:10 ON 25 JAN 2003)

FILE 'BIOSIS, MEDLINE, INPADOC, CAPLUS' ENTERED AT 15:31:38 ON 25 JAN 2003

L1	44 TISSUE AND SCAFFOLD AND "TYPE II COLLAGEN"
L2	31 DUPLICATE REMOVE L1 (13 DUPLICATES REMOVED)
L3	0 (POLYMER(5A)SCAFFOLD) AND IMPREGNAT? AND COLLAGEN
L4	67 (POLYMER(5A)SCAFFOLD) AND COLLAGEN
L5	39 DUPLICATE REMOVE L4 (28 DUPLICATES REMOVED)

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